



technology for innovation

UAV DETECTION

SURVEILLANCE



Detection and Tracking of Small UAV

Tracking of multiple targets

Multi-Sensor approach for high detection rate

Target neutralization

The MUROS S UAV Detection faces the threat coming from the wide use of commercial Unmanned Air Vehicles (UAV). The possibility for using these small cheap platforms for transporting an IED (explosive) or a “dirty bomb” to the core of a public event is today seen as realistic menace, as well as the performance of demonstrative actions against authorities that might result in panic or immaterial damages.

To this aim MUROS S provides capabilities for air surveillance against low flying, small and slow air platforms: this includes early detection, tracking, recognition, and “soft” neutralization.

The mobility of the MUROS S UAV Detection allows to establish safe zones very fast, wherever needed.

MUROS



UAV DETECTION



Multi-sensor approach:
 FMCW air surveillance radar
 Communication interception system
 Camera system, daylight and night vision

UAV Countermeasures:
 Communication link Jamming
 GPS-Spoofing
 HPEM (High Power Electro Magnetics)
 Laser

Several hours of autonomous operation

Full integrated sensor suite

Powerful data and voice
 communication equipment

Climate control for operation in
 challenging environmental condition

Typically two Operators with full
 equipped work posts

The core elements are an FMCW radar for air surveillance and a passive Communication Interception system, which is designed in order to detect and recognize the video data link between the UAV and the control pad.

These sensors are able to provide an alert and the angle of arrival of the UAV in a time interval of few seconds within a range up to 1 km. This information cues the electro-optical sensors that perform tracking and recognition of the incoming platform

If classified as a threat, a radio-frequency jamming system dissuades the system by deviating its path or inhibiting its communication link.

As some UAVs might be fully pre-programmed to target a given position – hence they cannot be deviated – a HPEM system on Board the MUROS S UAV Detection system is able to disturb the electronic system of the UAV, what causes its crash.

Laser systems are able to blind the optical components of the UAV and prevent their further usability. High energy laser can also be integrated in MUROS S, which allows burning the approaching UAV. The complexity of the laser system – including the high power consumption – requires ad hoc adaptation of the vehicle, and can be operated only in stationary configuration.